

Duct air quality sensors / controllers (VOC) and measuring transducers, including mounting flange, self-calibrating, with multi-range switching and active / switching output

The self-calibrating microprocessor-controlled duct air quality sensor **AERASGARD® KLQ** is used to determine the air quality on basis of a mixed gas sensor / VOC sensor (VOC = volatile organic compounds).

It is used:

- For air quality measurement in offices, hotels, meeting rooms and convention centres, apartments, stores, and restaurants, etc.
- For quantitative evaluation of room air pollution with contaminating gases (cigarette smoke, body perspiration, exhaled breathing air, solvent vapours, emissions from building members and cleaning agents)
- For adjustable sensitivity regarding the maximum air contamination to be expected
- For room ventilation as-needed, enabled by air changes only taking place when air is polluted while conserving energy at the same time.

The sensor's service life depends on the type of burden and gas concentration and is more than 60 months under normal load conditions. The new design allows you to choose between three sensitivity ranges that are adjusted using DIP switches, giving you three measuring ranges: LOW for low, MEDIUM (default) for medium, and HIGH for high VOC sensitivity.

VOC is the abbreviation for volatile organic compounds. According to the definition by the World Health Organization WHO, VOC are organic substances with a boiling range from +60 to +250 °C. Examples of VOCs include compounds of the substance groups alkanes / alkenes, aromatic compounds, terpenes, halogenated hydrocarbons, esters, aldehydes, and ketones.

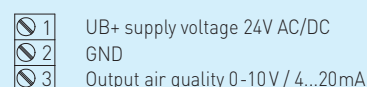
There is a large number of naturally occurring VOCs, some of which are also released into the atmosphere in substantial quantities, e.g. terpenes and isoprene from forests.

For more information, please refer to beginning of this chapter.

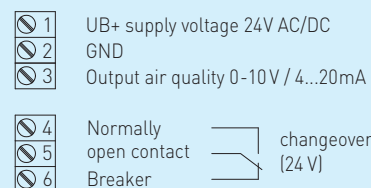
**TECHNICAL DATA:**

- Power supply: .....24 V AC / DC, current consumption approx. 70 mA at 24 V
- Power consumption: .....< 3 VA at 24 V DC
- Sensor: .....VOC sensor (metal oxide), **with automatic self-calibration**
- Sensor protection: .....sinter filter, exchangeable, screwed, easy to clean
- Measuring range: .....0..100 % air quality; referred to calibrating gas; **multi-range switching** (selectable via DIP switches) VOC sensibility low, medium, high
- Output: .....0 - 10 V (0V = clean air, 10V = polluted air) or 4...20 mA (selectable via jumper) (optional with potential-free changeover contact 24 V, switchpoint adjustable from 0..100% of output signal)
- Measuring accuracy: .....±20% of final value (referred to calibrating gas)
- Detection of gases: .....not selective
- Long-term stability: .....<10% per year
- Warm-up time: .....approx. 1 hour
- Ambient temperature: .....0...+50 °C
- Response time: .....< 10 s, minimum flow rate 0.2-0.5 m/s
- Electrical connection: .....0.14 - 1.5 mm<sup>2</sup> via terminals on circuit board
- Enclosure: .....plastic, material polyamide, 30% glass-globe-reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016)
- Enclosure dimensions: .....72 x 64 x 37.8 mm (Tyr 1 without display)
- Cable gland: .....M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
- Protective tube: .....PLEUROFORM™, material polyamide (PA6), Ø 20 mm, NL = 202.5 mm, with torsion protection
- Process connection: .....by mounting flange, plastic (included in the scope of delivery)
- Protection class: .....III (according to EN 60 730)
- Protection type: .....IP 65 (according to EN 60 529) enclosure only!
- Standards: .....CE-conformity, electromagnetic compatibility according to EN 61 326, EMC directive 2004 / 108 / EC
- ACCESSORIES: .....See last chapter

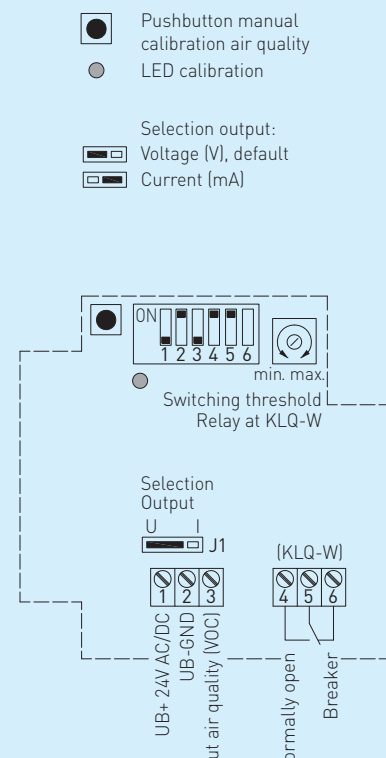
Connecting diagram **KLQ**



Connecting diagram **KLQ-W**



Schematic diagram **KLQ** **KLQ-W**



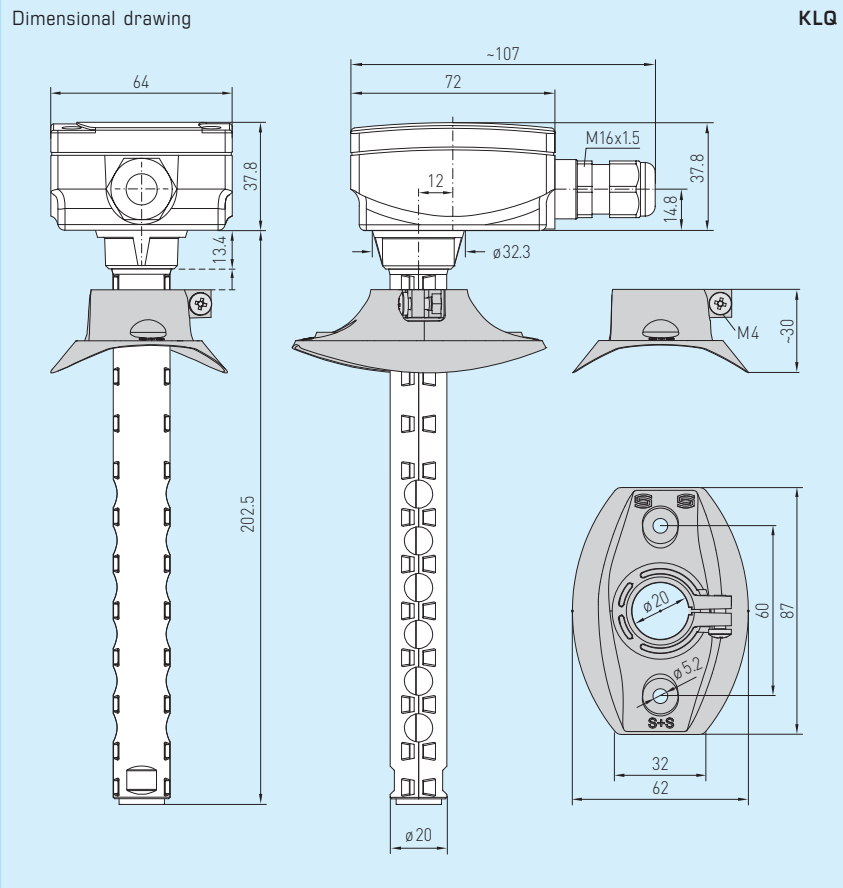


**NEW**

S+S REGELTECHNIK

AERASGARD® KLQ

Duct air quality sensors / controllers (VOC) and measuring transducers, including mounting flange, self-calibrating, with multi-range switching and active / switching output



**MFT-20-K**  
Mounting flange, plastic

DIP switches	KLQ		
<b>VOC (sensitivity adjustable)</b>	<b>DIP 1</b>	<b>DIP 2</b>	<b>DIP 3</b>
VOC LOW	<b>ON</b>	OFF	OFF
VOC MEDIUM (default)	OFF	<b>ON</b>	OFF
VOC HIGH	OFF	OFF	<b>ON</b>
<b>VOC-Calibration mode</b>	<b>DIP 4</b>		
Automatic self-calibration	<b>ON</b>		
Manual calibration	OFF		
<b>Selection output (I)</b>	<b>DIP 5</b>		
Output 4...20 mA	<b>ON</b>		
Output 0...20 mA	OFF		

**AERASGARD® KLQ**  
including mounting flange

Type / WG1 / 01	Measuring Range VOC	Output VOC	Features	Display	Item No.	Price
<b>KLQ</b>					<b>without display</b>	
KLQ	0...100%	0-10 V / 4...20 mA	-		1501-3150-7001-422	<b>220,01 €</b>
KLQ-W	0...100%	0-10 V / 4...20 mA	Changeover contact		1501-3150-7301-422	<b>234,74 €</b>

Note: This unit **must not** be used as safety-relevant device!

